FLORIDA INTERNATIONAL UNIVERSITY
CHAPMAN GRADUATE SCHOOL OF BUSINESS

Master of Science in MIS
Course Descriptions

Database Management

The general objective of this course is to help the student understand how to conceptualize and implement databases, and use query languages to manipulate databases to obtain information that can help a manager make decisions. This course will take a data oriented, rather than processing view of systems.

Learning Objectives:
1. Be able to design a conceptual data model using the entity relationship (ER) model
2. Understand the various notations used to represent an ER diagram
3. Learn the rules and heuristics to develop a good ER diagram
4. Be able to design a logical data model using the relational model
5. To learn data base query languages (DBQLs). In this course, two DBQLs will be taught - SQL (on Teradata or Oracle) and Access Query Language (on Access)
6. To learn the basics of data warehousing

Information Security

The WWW is changing the way the world engages in business. With this paradigm shift comes uncertainty about how e-commerce transaction are over an inherently secure medium-the Internet. Businesses have learned the hard way that there is not a “silver bullet” solution-not encryption, not firewalls, and not even secure protocols. Like a chain, the security of e-commerce is only as strong as its weakest link. E-security and e-payments are complex topics that touch on many aspects of traditional computer security, computer architectures, systems design, software engineering, Internet technology, mathematics, and the law. The intent of this course is to highlight the weak links and provide the best defenses for individuals and enterprises connected to the Internet.

Learning Objectives:
1. Expose the dangers of active content programs.
2. Provide a comparison of different security protocols for e-security and e-payment systems.
3. Present security considerations for servers, online databases, and server side applications.
4. Detail shortcomings in firewall technology and other host security measures.
5. Security considerations with wireless/mobile technology.

E-Commerce Management

As businesses and organizations seek to increase the efficiency of their computing systems, and integrate innovative technologies, application developers will be in demand to plan, build, test, deploy, and maintain new software applications. Application development is the process of designing, building and maintaining a

computer system that will increase the efficiency, productivity, and bottom-line of an organization. The need for organizations to incorporate existing and future technologies in order to remain competitive has become a more pressing issue over the last several years. As electronic commerce becomes more common, how and when companies use technology are critical issues. Computer and information systems managers play a vital role in the technological direction of their organizations. They do everything from constructing the business plan to overseeing network and Internet operations.

Learning Objectives:
Upon completion of this course, students will be able to:
1. Understand how technology can be used to develop electronic commerce systems.
2. Understand how web services such as XML-based are used to create B2B and B2C applications.
3. Compare and contrast the use of Windows-based applications and web-based applications and the advantages and disadvantages of each.
4. Have an understanding of the maintenance and management of electronic commerce systems

E-Commerce Strategy

As information and communication technologies in general and Internet in particular transform the economy, organizations are re-examining their strategy to take advantage of this major shift in the business environment. This course takes two perspectives. First is the perspective of existing "brick and mortar" businesses that are planning a transformation from "brick and mortar" strategy to a "brick and click" strategy. Second perspective is that of e-business entrepreneurs (technopreneurs) attempting to develop a strategy for e-business startups. The course takes a practical, problem-based learning approach in which students study e-business transformations and develop plans and proposals for establishing e-businesses.

Learning Objectives:
1. An understanding of how e-Business is transforming the economic landscape and the associated business models of business organizations.
2. An overview understanding of strategies for transforming existing “brick and mortar" organizations to "brick and click" and "pure-play" organizations.
3. Ability to develop and execute a business plan for creating an e-business startup.
4. Examining impacts on marketing, finance & accounting, information systems, and logistics & the supply.
5. Analyze synergies among functional areas to create an integrated EB.
6. Understand why some firms fail and others succeed in electronic commerce.

Knowledge Management

The course is designed to serve as a complete introduction to the subject of knowledge management (KM) from the point of view of business management, including an in-depth treatise of the technologies used to facilitate the processes of discovering, creating, sharing and applying knowledge in large and small organizations. To truly learn KM as it applies to today's technology intensive business environments, it is imperative that students be able to visualize actual examples of the KM techniques being studied. Furthermore, they must also be able to experiment with knowledge management systems (KMS) that embody concepts covered in the class lecture. The course will focus on covering the principles of KM. Finally, practical applications are discussed, from how to perform an organizational KM assessment to how to effectively implement KM applications.

Learning Objectives:
Upon the completion of this course students should be able to:
1. Understand the basic concepts related to the field of knowledge management (KM), including the underpinning theoretical descriptions of what is knowledge and what is KM.
2. Understand what are KM systems, and the organizational impacts that those systems are having. Furthermore, factors influencing the success of KM solutions are presented, including how these systems should be aligned to the organization’s business strategy.

3. Understand the significance of a KM assessment, and how to effectively carry an organizational KM audit.
4. Understand the intelligent technologies that are the foundation of many KM systems.
5. Understand the different types of KM systems: knowledge discovery, knowledge capture, knowledge sharing, and knowledge application systems.

Project Management of Information Systems

Although IT projects are similar in some ways to other types of projects, they pose unique challenges for the managers and organizations that undertake them. IT project management is particularly challenging because of several factors including: (1) the rapid pace of technological changes occurring in the IT field, (2) the invisible nature of software, (3) the ever-present pressure to add new features and functionality to systems, and (4) the difficulty of managing the organizational changes that accompany most IT implementations.

1. Articulate similarities and differences between IT projects and other types of projects.
2. Justify an IT project by establishing a business case
3. Evaluate alternatives for acquiring information systems and select a course of action
4. Develop a project charter
5. Develop a work breakdown structure for an IT project
6. Estimate task durations and assign resources
7. Establish task interdependencies
8. Draw and analyze a network diagram
9. Identify IT project risks and develop risk mitigation strategies

Systems Analysis and Design

This course will introduce students to the field of Systems Analysis and Design in general, and focus in depth on object-oriented concepts, methodologies, skills and associated software tools. While object-oriented programming methods have been around for quite some time, the application of object-orientation to the systems analysis process is relatively new. This course will expose students to standard O-O methodologies, as well as supporting tools and technologies.

Learning Objectives:
1. Survey the general field of Systems Analysis and Design, covering all major methods
2. Understand O-O concepts and methods in detail
3. Apply O-O concepts and methods to the process of designing software/hardware/network systems.
4. Use standard tools and methodologies to facilitate the analysis and design process

Enterprise Information Systems

This course introduces the student to the processes which organization's use to accomplish their goals and objectives. Working in groups students will use real world examples of organization processes to derive process maps from transaction interviews. The groups will then attempt to integrate their individual process maps into one organization process, which spans multiple organizational entities. Also included are the concepts of incremental change, business process redesign, and re-engineering. The
second part of the course discusses and provides insights to two major aspects of enterprise system configuration. The first, top-down approach is the configuration of the enterprise system to match the organization's structure and the company's physical layout. The second or bottom-up approach examines the physical configuration of the system itself. This course will focus on the first method and additionally uses several examples to illustrate the second approach.

Learning Objectives:

1. Explain and analyze the strategic fit between organization structure and information system design.
2. Understand the process through which organizational processes are derived and mapped.
3. Map an organizational process from interview transcript.
4. Comprehend the elements, modules, and integration of the SAP R/3 package.
5. Translate the process design elements through exercises using the SAP software.

Special Topics in Information Systems

The purpose of the course is to cover special topics (not covered elsewhere in the program), which are then illustrated by state of the art technology. Currently, it is expected that the course will cover programming topics to provide students with a solid foundation in an object-oriented language.

Java: Students will be exposed to:

1. The JDK and the JVM (Java Virtual Machine)
2. Building Java applications and applets
3. Java Packages and the API
4. Data Types and Operations
5. Class definitions, class data, class methods, and class constructors
6. Type conversions (casting)
7. Program flow using selection and repetition
8. The String, ArrayList, StringTokenizer and wrapper classes
9. GUI classes
10. The Timer and/or Thread class for animation
11. Reusing code through Inheritance and Polymorphism
12. Networking classes
13. Servlets, XML and JBDC
14. Exception handling

Telecommunication Networks

Individuals need data communication, telecommunication, networking and Internet competencies to succeed in today's environment. Data communication, telecommunication, networking and Internet knowledge can open new doors in ones life. This class will provide students with the fundamental understanding of the principles of data communication, telecommunication, networking and Internet. The course is design to assist the student in understanding the infrastructure of today's data communication, telecommunication, networking and Internet technologies for business implications. During the course the students will experience appropriate case studies from the industry as well as practice exercises.

Learning Objectives:

1. A fundamental understanding of the principles of data communication, telecommunication, and networking
2. Infrastructure for business implications an overview of today's data communication, telecommunication, and networking technologies
3. Installations and implications of modern data communication, telecommunication, and networking in the design of information systems
4. Appreciate the competitive advantage of using data communications, telecommunications, and networking to businesses

Management of the IS Function

This course helps students develop some of the new competencies required of the CIO: deep knowledge of how the enterprise competes or provides services, the ability to run the IS organization in a business-like

fashion, and the behavioral skills needed to gain support for initiatives and maintain momentum in innovation. For the new CIO, technical skills certainly remain important, but they have become a given, they're the necessary but no longer sufficient skill required for the IS work to be done. This course helps students understand that in order for IT professionals to enhance their careers and professional growth, they need to learn how to bridge the gap between technical and business issues. This course covers the fundamental topics on how IT professionals may effect this "bridging".

Learning Objectives:
Upon the completion of this course students should be able to:
(1) Understand how to use technology to solve business problems;
(2) Communicate with business managers
(3) Analyze technology alternatives, costs, benefits, and risks;
(4) Manage teams, including both internal and/or vendor teams; and
(5) Assess the effect that current IT trends may have on them and their organizations, including topics related to: outsourcing, offshore labor, quality programs and standards, and security concerns.

Web Management

In the current business environment, every organization needs a professional presence on the Web. Whether the site provides services (e.g., e-tailing), or simply information, an organization is not considered credible without a solid Web site. This class will introduce students to the technologies and concepts underlying production-quality Web infrastructures. During the course, students will use professional-quality infrastructure software and tools to gain experience with the technologies. At the end of the course, students will have a solid understanding of what goes into building and deploying a production-quality Web site.

Learning Objectives:
1. Survey web architectures and how web requests are served
2. Consider the Web user interface, both in terms of technology and user-interface design principles
3. Study the back-end components of a Web site, covering J2EE technology in detail and considering .NET technology in high-level overview
4. Implement a simplified e-commerce site
5. Identify important administration and monitoring tasks
6. Survey value-added components, e.g., personalization engines and content management systems
7. Analyze expected load, desired QoS levels, and infrastructure capabilities to appropriately size a Web site infrastructure

Professional Development Seminars (PDSs)

Seminars will focus on soft skills such as leadership, team building, oral presentation, writing skills and career exploration. There will be team-building activities which include classroom exercises in group decision-making and problem-solving. Challenging outdoor exercises will be included to help participants build the skills they will need to work together in the program and to succeed in today's team-based organizations. Students will also work with a presentation and writing skills coach to improve the communication and writing skills that are critical to managerial success. All Professional Development Seminars are mandatory.